

41958

S/194/62/000/009/074/100  
D295/D308

9.4/20

AUTHORS: Grosu, X. and Sandulovici, R.

TITLE: Dependence of spontaneous voltage oscillations of a glow discharge in oxygen on the length of positive column

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 9, 1962, 50, abstract 9Zh299 (Studii și cercetări științ. Acad. RPR Fil. Iași. Fiz. și științe tehn. v. 11, no. 2, 1960, 183-188 (Rum.; summaries in Fr. and Rus.))

TEXT: In glow discharges with anomalous potential drop at the cathode, when the anode is situated in the positive column, the frequency of voltage oscillations depends inversely on the length of the column. These oscillations can be considered as self-resonant oscillations of the positive column which constitutes a linear oscillator. It follows that oscillations with a determined self-resonant frequency can exist not only in the discharge column  
Card 1/2

Dependence of spontaneous ...

S/194/62/000/009/074/100  
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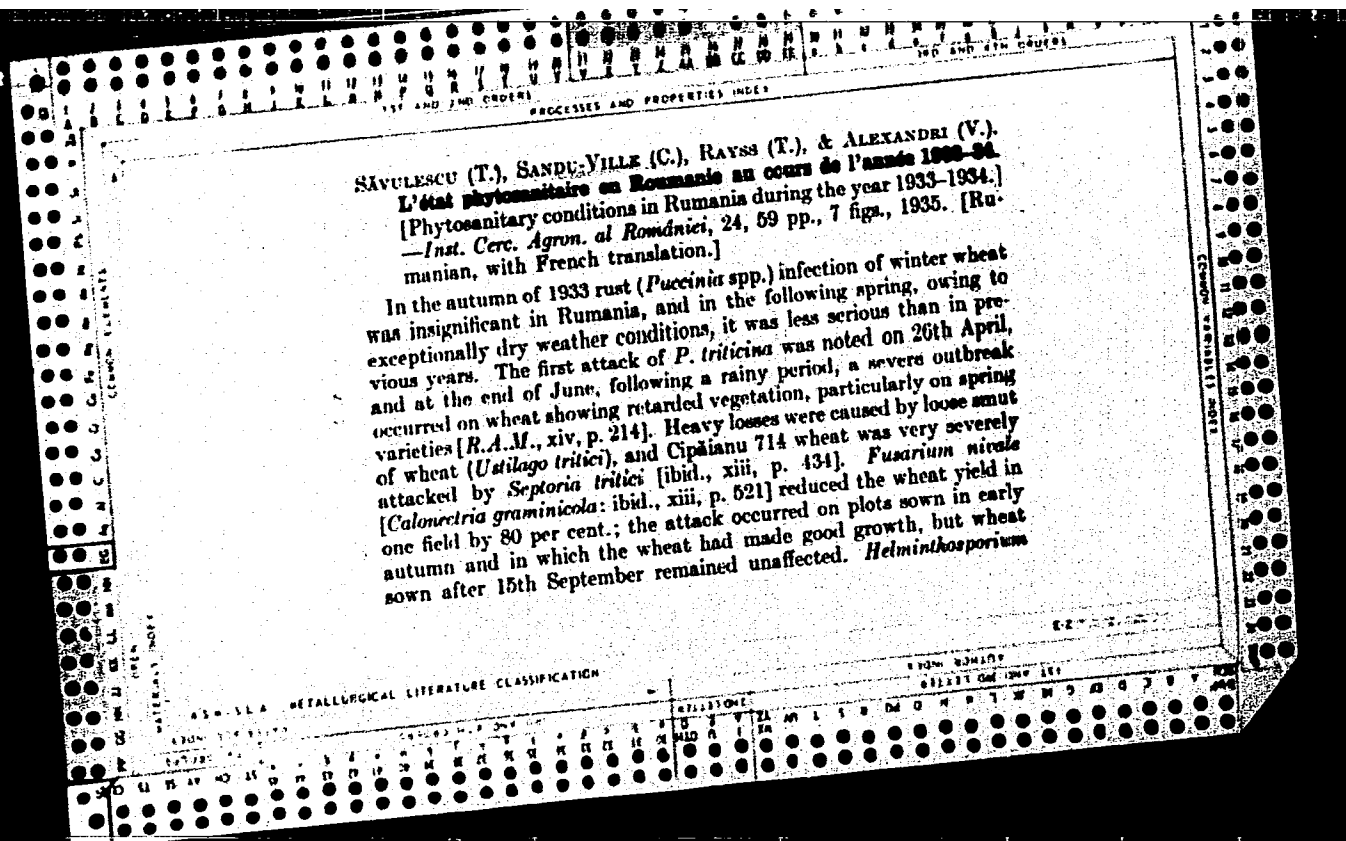
as a whole but also in separate homogeneous regions of the column  
(the negative glow region, the positive column) according to the  
position of the anode. [-Abstracter's note: Complete translation.]

Card 2/2

Am

SAYULESCU (T.) & SANDU-VILLE (C.). *Beiträge zur Kenntnis der Micromyceten Rumäniens.* [Contributions to the knowledge of the micromycetes of Rumania.]—*Hefwigia*, lxxiii, 3-4, pp. 71-132, 1933.

Of the 200 species of fungi (mostly Fungi Imperfecti, with a few Ascomycetes) included in this annotated list (bringing the total micromycetes described in Rumania to 343), 23 are described as new and are furnished with Latin diagnoses. A few new forms and varieties are also included.



*turcicum* [ibid., xiv, p. 685], first recorded in Rumania in 1933, caused severe infection of maize in several localities and also occurred on sorghum near Bucarest. Foot rot of barley was caused by *F. culmorum* [ibid., xiii, p. 623].

Attention is drawn to the important part played by self-sown plants in the dissemination of most of the above-mentioned fungi, which live over on volunteer plants until the winter cereal crops appear. Cereal rust spores fall on the ground before and during harvest, remain alive on the stubble, and pass on to self-sown plants, where they produce new spores which in turn infect the young winter wheat. The severity of the autumn infection of cereal rusts depends on the date of sowing and the meteorological conditions, and owing to favourable weather in the autumn of 1934, severe infection was general throughout Rumania. *Leptosphaeria tritici* [ibid., viii, p. 290] is transmitted to wheat in autumn from self-sown plants, as is *L. passerinii* to barley; both cause a yellow discoloration of the leaves. *Erysiphe graminis*, commonly present on wheat and barley leaves, spreads during summer from self-sown plants to autumn crops.

SANDU-VILLE, C.; BADULESCU, I.

"Contribution to the knowledge of micromycetes in Moldavia", p. 309. "Journal on science issued by the Iasi Branch, Rumanian Academy: with French and Russian summaries. Quarterly". (STUDII SI COMENTARI STIINTIFICE) Vol. 5, no. 1/2, Jan./June 1954 Filiala Iasi.)

SO: Monthly List of East European Accessions, (EEAL), LC, vol. 4, No. 5, May, 1955.

Country : Rumania 0  
 Category : Plant Diseases. General Problems.  
 Abstr. Jour. : Ref Zhur-Biologiya, No. 14, 1958, No. 63657  
 Author : Sandu-Velle, C.  
 Institut. : ~~Inst~~ Institute of Sciences RPR  
 Title : New Diseases of Cultivated Plants Occurring in Rumania in 1955  
 Orig. Pub. : Studii si cercetari stiint. Acad. RPR Fil. Iasi. Biol. si stiinta agric., 1956, 7, No. 1, 187-192  
 Abstract : Erysiphe cichoracearum DC. on Salmon. has been described for the first time in Rumania as a parasite of Solidago canadensis L.; Oidium chrysanthemi Rabenh. occurred as a parasite of the chrysanthemum. Ascochyta weisiana Allesch. which is known as a parasite of two ornamental species of snapweed (Impatiens) in Germany is new to Rumania.

Card: 1/1

SANDU-VILLE, Const.; LAZAR, Alesandru; HATMANU, Mircea

New studies on micromycetes in Rumania. Studii biol agr  
Iasi 14 no.1:7-22 '63.



SEPTILICI, Georgeta; SANDU-VILLE, Gabriela; GHERMAN, Maria

Controlling the sulfitated must fermentation by using  
yeasts taken from the Cotnari vineyard. Studii biol agr  
Iasi 14 no.1:185-192 '63.

SANDU-VILLE, C.; LAZAR, A.; HATMANU, M.; SEREA, C.

New micromycetes in Rumania. Studii cerc biol veget 15  
no.1:7-18 '63.

1. Membru corespondent al Academiei R.P.R. (for Sandu-Ville).

SANDU-VILLE, Constantin; LAZAR, Alexandru; HATMANU, Mircea

Some more new micromycetes in Rumania. Studii biol  
agr Iasi 13 no:2:255-269 '62.

SANDU-VILLE, Constantin; HATMANU, Mircea; LAZAR, Alexandru

A new contribution to the knowledge of the Erysiphaceae  
in Rumania. Studii biol agr Iasi 13 no.2:271-275 '62.

SANDU-VILLE, Const.; LAZAR, Alexandru; HATMANU, Mircea

Contributions to the knowledge of the biology of the  
Botryotinia fuckeliana (de Bary) Wetzel mushroom, a  
parasite of the grapevine, and how to combat it. Pt.2.  
Studii biol agr Iasi 13 no.2:389-398 '62.

SANDU-VILLE, C.; LAZAR, Al.; HATMANU, M.

New contributions to the micromycetes in Rumania.  
Studii cerc biol s. bot 16 no. 4:295-304 '64.

1. Chair of Plant Protection, "Ion Ionescu de la Brad"  
Agricultural Institute, Iasi. 2. Corresponding Member  
of the Rumanian Academy (for Sandu-Ville).

SANDU-VILLE, G.

RUMANIA/Plant Diseases - General Problems.

0-1

Abs Jour : Ref Zhru - Biol., No 15, 1958, 68491

Author : Sandu-Ville, G.

Inst : Institute of Agronomy Iassy and Bucharest.

Title : New Development in Phytopathology During 1953.

Orig Pub : Anuarul lucrar, stiint. Inst. agron. Iasi, Bucuresti,  
1957, 85-92.

Abstract : Among parasites new to Rumania is the fungus *Septoria delphinella* Sacc., found in Bacau Region on the leaves of *Delphinium ajacis* L., which causes the infested plants to wither. In the same region, *Septoria callistephi* was discovered on *Callistephus chinensis* (L). Nees. *Uromyces betae* (Pres.) Lev., hitherto known in only two regions was also discovered in Iassy on semi-sugar beet, but only in the form of uredospores and teleutospores.

Card 1/2

SANDU-VILLE, Gorun

Determination of the optimum period for cleaning and plowing  
the soil for viticultural schools in the north of Moldavia.  
Studia biol agr Iasi 14 no.2:337-346 '63.



SANDUKOVSKIY, I.M.

Gastric cancer in a 13-year-old girl. *Pediatria* 39 no.4:81-82  
Jl-Ag '56. (MIRA 9:12)

1. Iz detskoy klinicheskoy bol'nitsy No.1 (glavnyy vrach Ye.V.  
Prokhorovich, glavnyy khirurg A.N.Ryabinkin)  
(STOMACH NEOPLASMS, in inf. and child)

SANDUL, G.

The field, this is ~~our~~ school. Prof.-tekh. obr. 22 no.3:12-14 Mr '65.  
(MIRA 18:7)

1. Direktor Belogorskogo sel'skogo professional'no-tekhnicheskogo  
uchilishcha No.8, Amurskaya oblast'.

L 13871-66 EWT(l)/EWP(e)/EWT(m)/I/EWP(t)/EWP(b)/EWA(h) IJP(c) JD/AT/WH  
 ACC NR: AP5028146 SOURCE CODE: UR/0077/65/010/006/0450/0451

AUTHOR: Kostyshin, M. T.; Mikhaylovskaya, Ye. V.; Sandul, G. A.; Romanenko, P. F.

ORG: Institute of Semiconductors AN UkrSSR (Institut poluprovodnikov AN UkrSSR)

TITLE: Photosensitivity of thin semiconductive layers

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 10, no. 6, 1965, 450-451

TOPIC TAGS: photosensitivity, visible light, semiconducting material

ABSTRACT: CuCl was found to have the same photosensitivity properties as are exhibited by PbI<sub>2</sub>. When deposited in thin layers on quartz or glass, these compounds form latent images upon exposure to visible light. These images may be developed on heating. Temperatures required are 180-240°C for PbI<sub>2</sub> and 150-200°C for CuCl. If heated to these temperatures during exposure, the latent images appear on subsequent exposure to radioactivity. The source of light may also serve as the source of heat in developing the latent image. It was shown that other halides are also light sensitive. Compounds of sulfur (As<sub>2</sub>S<sub>3</sub>, Sb<sub>2</sub>S<sub>3</sub>, CdS, PbS), selenia (As<sub>2</sub>Se<sub>3</sub>) and

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UDC: 772.93.01

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ACC NR: AP5028146

tellurite (ZnTe) are similarly photosensitive. Light sensitive layers are produced by vacuum deposition at pressures on the order of  $10^{-4}$ - $10^{-5}$  cm Hg. The layers are exposed for a period of from a few minutes to an hour. They are then heated in an oven for from 5-10 minutes, at temperatures between 100°C and 200°C. The reaction apparently takes place as a result of the rupture of the electronic bonds of CuCl. The cuprous and chloride ions react in pairs in the defects of the crystal lattice and form molecules of chlorine and copper. The atoms of copper are trapped in the lattice forming the resultant visible image. Heating accelerates the rupture of the bonds of CuCl. By selecting appropriate semiconductive material, layers can be produced which are sensitive to various portions of the spectrum. Applications may be found in microphotography. Orig. art. has: 2 figures.

SUB CODE: 20/

SUBM DATE: 25Jun65/

ORIG REF: 000/

OTH REF: 003

Card 2/2 mc

SANDUL, M.G.

Metallic foreign body in the esophagus of a newborn child.  
Zdravookhranenie 4 no. 2:56-57 My-Ap '61. (MIRA 14:4)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - doktor med.nauk  
D.A. Bytchenko) Kishinevskogo meditsinskogo instituta.  
(ESOPHAGUS--FOREIGN BODIES)

KAL'YANTS, K.S., gornyy inzh.; SANDUL, N.P., gornyy inzhener

Rapid drifting of a haulage roadway. Ugol' Ukr. 3 no.7:30-32<sup>1/2</sup>  
Jl '59. (MIRA 12-14)

1.Shakhta No.3/5 "Yasinovskaya" tresta Sovetskugol'.  
(Donets Basin--Mining engineering)

SANDUL, T. V.

USSR/ Chemistry - Chemical technology

Card 1/1 Pub. 116 - 26/30

Authors : Karavayev, N. M.; Zykov, D. D.; Garber, Yu. N.; Gumenyuk, T. D.; and Sandul, T. V.

Title : Phase equilibriums of naphthalin with coal tar fractions

Periodical : Ukr. khim. zhur. 21/3, 410-415, June 1955

Abstract : The phase conversions of naphthalin with various coal tar fractions was investigated on a laboratory rectification column to determine the effect of low boiling components (heavy fractions) on the phase equilibrium curve. The fact that coal tar and oil form a polyazeotropic mixture was taken into consideration and the results are evaluated. One USSR reference (1955). Tables; graphs.

Institution : The I. V. Stalin Metallurgical Inst., Dnepropetrovsk and the Inst. of Chem. Machine Constr., Moscow

Submitted : December 24, 1953 and January 14, 1955

KOCKOVA-KRATOCHVILLOVA, Anna; SANDULA, Jozef

Serologic method for detection of culture and wild yeasts.  
Kvasny prum 9 no.8:181-186 Ag '63.

1. Chemicky ustav Slovenskej akademie vied, Ceskoslovenska  
akademie ved, Bratislava.



KOCKOVA-KRATOCHVILLOVA, Anna; SANDULA, J.

The genus *Candida* Berkhout, VI. Intermediate forms between fermentation types I and IV. *Folia microbiol. (Praha)* 9 no.6:369-373 N '64.

1. Institute of Chemistry, Slovak Academy of Sciences, Czechoslovak Academy of Sciences, Bratislava.

SANDULACHE, Al.; BUTA, I.

Some hydrologic data concerning the lakes Sintejude and Stiuca  
in the lower basin of the Fizes River, Transylvanian Plain,  
Probleme geog 9:307-314 '62. (publ. '63)

ANTAL, A., dr.; GOLGOTIU, Octavia, dr.; SANDULACHE, Lia

Contribution to the study of school adaptation disorders as  
an indication of health conditions. *Pediatria (Bucur)* 14 no.1:  
65-72 Ja-F'65.

1. Lucrare efectuata in Institutul de igiena si sanatate publica,  
Cluj.

SANDULEAC, Eugen (Bucuresti)

Pastoral apiculture, a complex system of maintenance of bee families. Natura Biologie 16 no.2:35-42 Mr<sup>-Ap</sup> '64.

SANDULEAC, E. A.

RUMANIA/Cultivated Plants, Potatoes, Vegetables, Melons. M

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68187

Author : Sanduleac, Eugen A.  
Inst : Scientific Research Institute of Nutrition.  
Title : Colcurate de Tulcea, a Valuable Tomato Variety.

Orig Pub : Gradina, via si livada, 1957, 6, No 4, 16-17

Abstract : The Scientific Research Institute of Nutrition has developed the Colcurate de Ticea tomato variety which is outstanding for the high quality of its fruit. The fruits are large (100-160 g), oval shaped, identical in size, smooth, of a bright red color, and meaty; their taste is excellent, and they contain 5.20-5.90 percent of dry matter on the average, 0.49 percent of cellulose, 3.50-5.00 percent of su-

Card : 1/2

|            |                                                             |   |
|------------|-------------------------------------------------------------|---|
| NAME       | : ROMANIA                                                   |   |
| CATEGORY   | : Cultivated Plants.                                        | M |
|            | Grains. Legumes. Tropical Cereals.                          |   |
| ABS. JOUR. | : RZhBiol., No. 3, 1959, No. 10948                          |   |
| AUTHOR     | : Gheikling, Al., Sanduleac, E. V.                          |   |
| INST.      | : -                                                         |   |
| TITLE      | : On the Problem of the Improvement of Soybean Cultivation. |   |
| ORIG. PUB. | : Probl. agric., 1958, 10, No. 4, 69-77.                    |   |
| ABSTRACT   | : No abstract.                                              |   |

CARD: 1/1

04307 84687

S/169/60/000/009/005/007  
A005/A001

3.1810

Translation from: Referativnyy zhurnal, Geofizika, 1960, No. 9, pp. 196-197,  
# 11612

AUTHORS: Bryunelli, B.Ye., Sandulenko, S.M.

TITLE: 24 Radar Observations of the Polar Lights at Mirnyy ✓

PERIODICAL: Inform. byul. Sov. antarkt. ekspeditsii, 1959, No. 13, pp. 29-33

TEXT: The radar observations of polar lights began at Mirnyy in 1959. A radar with revolving antenna is used which operates at 72 Mc frequency; the coverage of the radar is 1,000 km. Altogether 7,333 shots were taken during the observation period; 585 of them were with reflections. The reflections represent in the overwhelming majority of the cases a totality of individual pulses which are not resolved with respect to the distance. The aurorae were observed in the main from 4<sup>h</sup> to 20<sup>h</sup> Greenwich Time; two maxima in 5<sup>h</sup> - 8<sup>h</sup> and 12<sup>h</sup> - 16<sup>h</sup> are expressed clearly. In March, the reflection rose is presented by a three-lobe configuration, the main lobe of which is directed to East; in April, the main

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S/169/60/000/009/005/007  
A005/A001

Radar Observations of the Polar Lights at Mirnyy

lobe has  $40^{\circ}$  azimuth. In May, a nearly uniform distribution of the reflections was observed in the sector from  $30^{\circ}$  -  $90^{\circ}$ . Reflections from distances of 650-750 km occurred most frequently. The altitude values obtained were less than 100 km.

N.V.Z.

Translator's note: This is the full translation of the original Russian abstract.

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S/203/61/001/005/009/028  
A006/A101

AUTHORS: Bryunelli, B.Ye., Sandulenko, S.M.

TITLE: Radar observations of auroras at Soviet Antarctic stations in 1959

PERIODICAL: Geomagnetizm i aeronomiya, v. 1, no. 5, 1961, 679 - 686

TEXT: The authors analyze the results of radar observations of auroras carried out at the Mirnyy and Vostok stations in 1959. Peculiarities in the seasonal variations of the number of reflections at Mirnyy are noted. In the diurnal rate two maxima were observed, which are created by reflections received from various directions. They are probably connected with the basic and inner zones of auroras. Similar conclusions can be drawn from data obtained from the Dumont-Durville station. The diurnal rate of the number, the azimuth, and the distance of reflections is illustrated in a number of graphs. At the Vostok station, the diurnal variation is characterized by a minimum with almost complete absence of reflection during the morning hours (local time 0 - 5 hours UT). During the day the number of reflections increases sharply, attaining a maximum in the afternoon and early evening (8 - 10 hours UT); and then decreasing. The radar observations carried out at Mirnyy and Vostok during a relatively short period revealed a num-

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S/203/61/001/005/009/028  
A006/A101

Radar observations ...

ber of substantial peculiarities in the geophysical phenomena of these regions. Two types of reflections are detected, the one of which should be connected with the basic zone of auroras and the other one with the inner zone. This statement does not only support the hypothesis on the existence of an inner zone, but reveals also some of its properties, such as activity during the day. This fact proves the efficiency of employing radar methods for geophysical investigations, which should be preferably used when investigating the second zone. Another peculiarity is the absence of correlations between radar reflections and magnetic activity, characteristic of intrazonal stations (e.g. Mirnyy). The observations are continuing. There are 9 figures and 5 references: 4 Soviet-bloc and 1 non-Soviët-bloc.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova (Leningrad State University imeni A.A. Zhdanov)

SUBMITTED: July 15, 1961

Card 2/2

SANDULESCU, A.

RUMANIA/Nuclear Physics - Structure and Properties of Nuclei

C-4

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 5134

Author : Brandus I., Sandulescu A.

Inst : -

Title : Natural Frequencies of a Compressed Nucleus in the Non-Static Statistical Model

Orig Pub : Studii si cercetari fiz. Acad. RPR, 1957, 8, No 4, 433-444

Abstract : The non-static consideration in the statistical model, developed first by Bloch (Bloch, F.Z., Phys. 1933, 81, 363) and supplemented by Jensen (Jensen, H.Z., Phys. 1937, 106, 620) for the atom, is extended to include a compressible nucleus. Only such excitations are investigated, which do not produce thermal motion in the nucleus, and which to an ordered hydrodynamic motion. The change in density in the nuclear liquid arising in this case is considered as a small perturbation. The equation for the perturbation in the density is derived from the least-action principle under the condition that the ratio of the number of neutrons to the number of protons in

Card : 1/2

MICU, M.; SANDULESCU, A.

Reduced widths for a nucleon emission on the basis of Nilsson's model.  
Studii cer.fiz. 10 no.4:651-657 '59. (BEAI 9:5)  
(Nucleons) (Nuclear modes)

SANDULESCU, A.

On the fine structure of  $\alpha$ -lines. Studii cerc fiz 11 no.1:9-12 '60.

(EEAI 10:1)

(Alpha rays)

(Nuclear reactions)

(Spectrum analysis)

SANDULESCU, A.

Reduced widths for the emission of triton or helion 3 on the basis of  
the shell model. Studii cerc fiz 11 no.1:19-34 '60. (REAI 10:1)  
(Nuclear shell theory) (Shell models (Nuclear physics))  
(Tritons) (Alpha rays)

SANDULESCU, A.; DUMITRESCU, A.

On the covering integral in the reactions with tritons  
or helium-3. Studii cerc fiz 15 no. 1: 21-35 '64.

1. Institute of Atomic Physics, Bucharest, University  
of Bucharest.

SANDULESCU, A.

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IAP(e)

19 21

Shell-model reduced width of  $H^+$  or  $He^+$  emission. A. Sandulescu. *Acad. rep. populare Romane. Inst. de fizica, Studii cercetari*, no. 11, 19-34 (1967). The excited compd. system is described in  $LS$  and  $jj$  coupling, and analytical expressions for the reduced width of its energy levels are given for 2 cases: (1)  $n$  equiv. nucleons and (2) 1 or 2 equiv. nucleons outside the closed shell. In the latter case, 2 or 1 nucleon from the closed shell, resp., participate in the emission and thus 3 nucleons have to be sepd. from the total wave function of the compd. system. This is in fact the wave function of the outside nucleons since these are not antisymmetrized with the nucleons from the closed shell. Comparison is made with exptl. evidence for the reactions  $He^+ \rightarrow H^+ + H^+$  and  $Li^+ \rightarrow H^+ + He^+$ . Mircea Potina



BRANDUS, I.; MICU, M.; SANDULESCU, A.

Reduced widths of the deuteron emissions on the basis of the  
Nilsson model. Studii cerc fiz 11 no.4:837-844 '60. (KRAI 10:8)

1. Institutul de fizica atomica, Bucuresti.  
(Deuterons) (Nuclear models)

MICU, M.; SANDULESCU, A.

Bound states of nucleons in a nonaxial deformed field. Studii cerc fiz 11  
no.4:957-972 '60. (REAI 10:8)

1. Institutul de fizica atomica, Bucuresti.

(Nucleons) (Oscillations) (Wave mechanics)

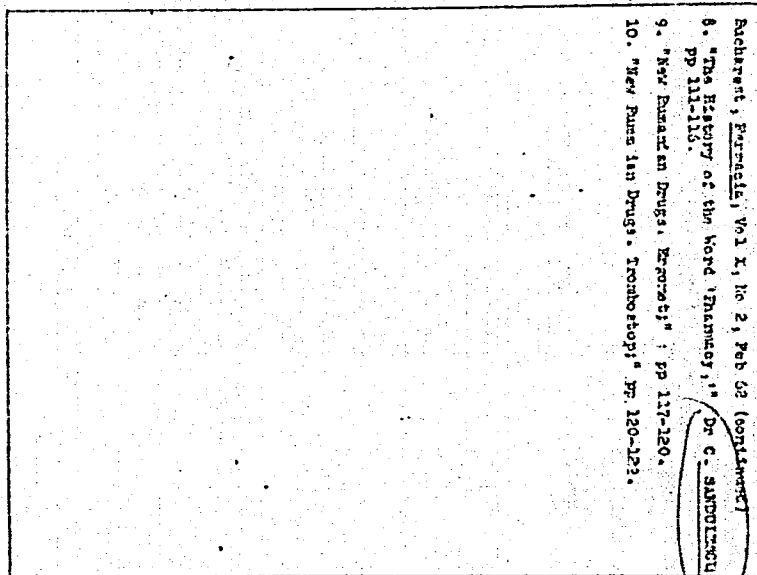
(Magnetic moment) (Potential, Theory of) (Anisotropy)

SANDULESCU, C.; SLUSANSCHI, H.

Attempts to separate mucilaginous substances from flax seeds. p. 1219.  
(COMUNICARILE. Rumania. Vol. 6, no. 10, Oct. 1956)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl

SANDULESCU, C.



Biography, Part 1, Vol. 1, No. 2, Feb 68 (continued)  
8. "The History of the Word 'Pharmacy,'" Dr C. SANDULESCU  
pp 11-13.  
9. "New Biomedical Drugs, Synthesis," pp 17-20.  
10. "New Biomedical Drugs, Introduction," pp 120-123.

①

2/2

SANDULESCU, G.; RAIU, I.

On the determination of lignin, cellulose, and pectic substances in flax and hemp fibers. p. 489.

Academia Republicii Populare Romine. STUDII SI CERCETARI DE CHIMIE. Bucuresti, Rumania. Vol. 6, no. 3, 1958.

Monthly List of East European Accessions (EEAI) Vol. 8, no. 7, July 1959.

Uncl.

SANDULESCU, C., ing.

Composition and structure of cereal proteins. *Analele chimie* 16  
no.4:149-163 Q-D '61.

1. Membru al Comitetului de redactie, "*Analele romino-sovietice,  
Chimie*".

(Proteins) (Grain)

SANDULESCU, C., ing.

The 5th International Congress of Biochemistry, held in Moscow August 14-16, 1961. Analele chimie 16 no.4:165-171 O-D '61.

1. Membru al Comitetului de redactie, "Analele romino-sovietice, Chimie".

(Biochemistry)

GRIGORESCU, G.; SCHELL, H.D.; BATCU, A.; MOTET-GRIGORAS, D.; CRISTEA, E.;  
SANDULESCU, C.

General problems and research methods in biochemistry. Studii cerc  
biochimie 5 no.3:457-459 '62.



PUSCARAU-SOROCEANU, Ev.; GRINEANU, A.; SANDULEAC, I.; POPOVICI, M.

Aerophotograms applied to the study and mapping of natural pastures on the hills and hillocks in the southeastern part of Rumania. Natura Biologie 13 no.6:1-8 M-D '61.

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| COUNTRY:   | : Rumania                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B-9   |
| CATEGORY   | :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |       |
| ABS. JOUR. | : RZKhim., No. 5 1960, No.                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 17017 |
| AUTHOR     | : Birladeanu, L., Costescu, C. D., and Sandulescu, D.                                                                                                                                                                                                                                                                                                                                                                                                                              |       |
| INST.      | : Rumanian Academy of Sciences                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |
| TITLE      | : On the Question of the Liquid Phase Oxidation of Cyclohexane by Air                                                                                                                                                                                                                                                                                                                                                                                                              |       |
| ORIG. PUB. | : Studii si Cercetari Chim Acad RPR, 6. No 4, 527-538 (1958)                                                                                                                                                                                                                                                                                                                                                                                                                       |       |
| ABSTRACT   | : The effect of catalyst concentration (0.25-0.5%), temperature, degree of conversion, and air flow rate on the rate of absorption of O <sub>2</sub> during the oxidation of cyclohexane by air in the liquid phase has been investigated. The activation energy for the reaction in the presence of Co naphthenate has been determined and found to be 19.5 kcal/mol. It is shown that the length of the chain is nearly independent of the temperature.<br>From authors' summary |       |
| CARD:      | 1/1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |       |

SANDULESCU, D.

Experimental gas chromatography. Rev chimie Min petr 12 no.11:655-  
659 N '61.

HANES, A., ing.; SANDULESCU, D., ing.

Determination of sylvan, furfurole, and furfuryl alcohol by gas-  
liquid chromatography. Rev chimie Min petr 12 no.11.664 N '61.

BOTA, T.; BUCUR, C.; DRIMUS, I.; STANESCU, L.; SANDULESCU, D.

A catalyzed Diel-Alder reaction. Rev. chimie Min. petr. 12  
no. 8:503 Ag'61.

L. Institutul de cercetari chimice.

SANDULESCU, D.

Experimental chromatography of gases. Pt.7. Rev. chimie Min  
petr 12 no.9:549-556 8'61

STERGHIU-FRIMESCU, M.; SANDULESCU, D.

Applied chemical spectroscopy. III. Sources of  
excitation. Rev chimie Min part 13 no.2:96-102 F '62.

HANES, A.; GHERMAN, I.; SANDULESCU, D.

Chromatographic analysis of benzene chlorinated derivatives  
in vaporous phase. Rev chimie Min petr 13 no.2:113  
F '62.



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Experimental gas chromatography. Pt. 5. Rev chimie Min petr 12  
no.7:406-412 J1 '61.

HANES, A., ing.; SANDULESCU, D., ing.; LUPU, C., ing.

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chemical products. Rev chimie Min petr 12 no.7:412-415 JI '61.

HANES, Ana, ing.; SANDULESCU, D., ing.

Determination of cyclohexanone and cyclohexanol by gas-liquid chromatography. Rev chimie Min petr 12 no.10:614-615 0 '61.

1. Institutul de cercetari chimice.

SANDULESCU, D.

2  
ROMANIA

HANES, A.; ROSCA, H.; SANDULESCU, D.

Bucharest, Revista de Chimie, No 11-12, Nov-Dec 63, Vol 14,  
pp 680-681

"The Determination of Melanine in the Presence of Amelido,  
Ameline, and Urea."

ZUGRAVESCU, P. Gh.; SANDULESCU, D.

Coulometric determination of low carbon dioxide in  
gases. Rev chimie Min petr 15 no. 1: 40-41 Ja '64.

STERGHIU-PRIMESCU, M.; SANDULESCU, D.

Applied chemical spectroscopy. Pt. 5. Rev chimie Min  
petr 15 no. 3: 149-155 Mr '64.

PETE, O.; ZUGRAVESCU, P.Gh.; SANDULESCU, D.

Determining oxygen traces in gases and liquids. Rev chimie Min  
petr 15 no.12:759-762 D '64.



GHIPS, Melania; SANDULESCU, D.; HERSCOVICI, J.; FIEROIU, Victoria; SFINTESCU, C.; FRUCHTER, Nuti

Documentation methods for technical and scientific chemical research. Rev chimie Min petr 15 no.12:745-753 D '64.

1. Submitted April, 1964.

✓ Liquid-phase oxidation of cyclohexane with air. Laduila Brlădeanu, C. D. Costescu, and D. Sindulescu. *Atas rep. populare Romina, Studi cercatori chim.* 6, 227-23 (1968).  
 Cyclohexane (b. 80.7°, d<sub>4</sub> 0.784, n<sub>D</sub> 1.4235) (I) was oxidized under various flows of air at 125-65°/6 atm. in the presence of 0.1-2.0% concn. of Co naphthenate (8% metallic Co) as catalyst to det. the best conditions under which the rate of O absorption reaches its max. The reaction took place in an electrically heated tubular steel reactor equipped with a cooling sleeve at the top and a compressor as the source of air. The evolved gas passed through a series of tubes filled with Ca which retained I, and then on to an Orsat app. for the gas analysis. In the 600-cc. reactor the liquid phase almost completely occupied the reaction space so that practically no vapor space existed at the reaction temp. CO<sub>2</sub> and O were detd. in the evolved gas at intervals varying between 15 and 30 min., and the total amt. of absorbed O and its absorption rate calcd. at any given moment. The product was decanted from the aq. layer, then distd. to eliminate the unreacted I and the oxidation product cyclohexanol (II) was detd. by acetylation with Ac<sub>2</sub>O in pyridine, cyclohexanone (III) by

the gravimetric method based on condensation with fural, the free acids by the index of acidity, and the esters by the index of esterification. The II + III content could be quite accurately detd. by sepg. the 155-64° distn. fraction which, being contaminated with acids and esters, indicated the necessity of submitting the oxidation product to an alk. hydrolysis, followed by vapor trailing, thus obtaining a II-III fraction of higher purity and increasing the yield by 2-4%. It was found that the O absorption was max. at 145-7° with 0.25-0.50% catalyst and a conversion of approx. 12%, yielding a II-III fraction of 60-65% after 80-90 min. of reaction time. The oxidation reaction of I in the liquid phase is an autocatalytic, homogeneous reaction due to a practically const. rate of O absorption. The activation energy of I oxidation in the presence of Co naphthenate is 19,000 cal. mol.<sup>-1</sup>. Temp. has very little effect on the duration of the chain reaction, if any at all. It was shown that the speed of global oxidation can be expressed by an equation based on the general theory of liquid-phase oxidation of I using for its deduction a reduced no. of elementary reactions.  
 Emil C. Marcuș

5(3)

R/003/60/011/03/005/026  
D0016/D3001

AUTHOR: Săndulescu, D., Stănescu, L., Ionescu, Al.Gh.

TITLE: The Study of Catalysts by Gas Chromatography.  
Part I. Chromatographic Characteristics of Oxide  
Catalysts for the Polymerization of Olefins

PERIODICAL: Revista de Chimie, 1960, Vol 11, Nr 3, pp 151-155

ABSTRACT: The authors describe their studies on the chromatographic behavior of silicon-alumina basis and catalysts of ethylene polymerization. The work carried out by the authors included the study of chromatographic characteristics, the volume of retention and the elution peak. It was established that ethylene and propylene are chemically absorbable by the basis even with temperatures ranging from 0°

to 100°C. The authors also explain the influence of chromium oxide on the activities of the catalyst and interpret the influence of the activating tem-

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D0016/D3001

The Study of Catalysts by Gas Chromatography. Part I. Chromatographic Characteristics of Oxide Catalysts for the Polymerization of Olefins

perature. They show that the important process in polymerization is the surface mobility of the carbon ion and not its formation. The article shows the preliminary data obtained by studying catalysts of silicon-alumina with chromium oxide by applying gas chromatography. The work represents an experiment to establish new evaluation methods, clarifying also the action of the catalyst. Many treatises on the catalysts activities, especially their acid properties, dealt with these problems, such as the works by Lewis and Brönsted. A complete study was contributed by Miessarov [Ref 2, 3] whereas a comparison between the different types of catalysts can be found in the works by Frost [Ref 4] and Handford [Ref 5]. Recently it was made clear that the most active regions

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D0016/D3001

The Study of Catalysts by Gas Chromatography. Part I. Chromatographic Characteristics of Oxide Catalysts for the Polymerization of Olefins

of the silicon-alumina catalysts correspond to a great extent to Lewis acids. It is evident that in these reactions the basis intervenes directly, due to the potential function of Lewis acids to form carbon ions, necessary in polymerization (according to Whitmore), but the influence of chemical compositions and other factors is not yet sufficiently known. A recent work [Ref 8] shows the parallel between the surface acidity of the catalyst and the conversion of propylene in the polymerization reaction. In another recent work [Ref 9] the magnetic properties of the chromium-silicon-alumina oxide system are studied for the purpose of defining the catalytic action by using the oxidation number and the distributing of chromium on the basis; it is shown that the basis has a strong influence upon the oxidation phase of chromium during activation.

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The Study of Catalysts by Gas Chromatography. Part I. Chromatographic Characteristics of Oxide Catalysts for the Polymerization of Olefins

The authors tested the silicon-alumina basis and catalysts with chromium oxide activated at 500 to 600°C. Granulation was 0.15 to 0.4 mm. Ethylene and propylene manufactured by ICECHIM had an impurity content of less than 0.5%. Prior to the determination, the sample was tried by passing a hydrogen current at 120-150°C for one hour. The "T<sub>1</sub>" and "T<sub>2</sub>"

translators, which are part of the chromatographic installation in the gas phase (Figure 1) build a derivation of a Wheatstone bridge. The second derivation is made of a potentiometric wire belonging to a Heyrovsky micro-polarograph. Figure 2 shows that in the case of ethylene, the introduction of chromium

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D0016/D3001

The Study of Catalysts by Gas Chromatography. Part I. Chromatographic Characteristics of Oxide Catalysts for the Polymerization of Olefins

and the activation at 500°C and 600°C does not essentially modify the retention volume and its variation of temperature. Results obtained by the authors are in conformity with the observations by Clark [Ref 14]. The authors also agree with Milliken [Ref 16] in their criticism of the evaluation method of the catalytic activity by acidity titration. There is 1 figure, 2 graphs and 17 references, 9 of which are English, 5 Rumanian, 2 Soviet and 1 German.

ASSOCIATION: Institutul de Cercetări Chimice (Chemical Research Institute), Bucharest

Card 5/5

VINTU, V.; SANDULESCU, D., ing.

Current problems in the study of some inclusion compounds. *Analele chimie* 15 no.3:99-126 J1-Ag '60. (KEAI 10:2)

1. Comitetul de redactie, *Analele romino-sovietce, Serie chimie*  
(for Sandulescu)  
(Chemical compounds) (Benzene) (Amines)  
(Nickel) (Cyanides)



R/003/61/012/006/001/001  
D019/D105

AUTHOR: Săndulescu, D.

TITLE: Experimental gas chromatography. V. Fixed phase

PERIODICAL: Revista de Chimie, no. 6, 1961, 341 - 345

TEXT: The author describes the principles of gas chromatography and presents some general considerations on the action and selection criteria of the fixed phase in gas-solid (GSC) and gas-liquid (GLC) chromatography. For some years, columns with the liquid distributed directly on the column without any support have been used more frequently. The main active supports are activated coal, silica gel, alumina and molecular sieves. The size of the granules ranges from 0.1 - 0.4 mm and the material is degassed at 120 - 200 °C. Activated coal is used particularly for the adsorption of H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, CO and CH<sub>4</sub>, whereas silica gel may be used for the analysis of ethylene and the usual impurities. The tailing of the elution peaks in GSC can be considerably reduced by using a particular liquid, e.g. ~~di~~octyl-phthalate for silica gel and "scalan", deposited from a solution in petroleum ether, for active coal. [Abstracter's note: ✓]

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D019/D105

Experimental gas chromatography. V. Fixed phase

"scalan" could not be found in available reference material<sup>7</sup>. Considerable progress has been achieved with the use of molecular sieves: in some cases the selectivity of the adsorption is very high, attaining the separation of the activated optical isomers, as described by V. Vintu and D. Săndulescu in Analele Romîno-Sovietice, 3, 1960, p 99. Molecular sieves may be used especially in the analysis of gases which do not easily liquefy, since they permit a good separation of O<sub>2</sub>, N<sub>2</sub> and CO. The supports used in GLC are diatomites and silicon firebricks. Diatomites are known as "celite 535", "celite 545", and "chromosorb". Rumanian diatomites suitably prepared may also be used. The material is suspended in water in an 18-cm-high beaker, in a 1 : 20 proportion, and the precipitate formed within 3 minutes dried, calcined for three hours at 300°C, then rinsed first with hydrochloric acid, then with water and finally dried. Treatment with a 5% solution of sodium hydroxide in methanol is often recommended. Sodium chloride, teflon granules, small glass beads, firebrick with silver-coated granules, sand, quartz and carborundum can also be used in

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D019/D105

Experimental gas chromatography. V. Fixed phase

many analyses. To obtain a high column efficiency a granule size of 0.02 - 0.06 mm, in case of diatomites, and 0.1 - 0.6 mm in case of other material is recommended. The eventual adsorption activity of the support may be determined by impregnating the support with different quantities of liquid and by calculating the specific degree of retention, which must be constant regardless of the support loading. A relatively high activity of the support may also be determined by the presence of tailings at the elution peaks. The optimum operation of an installation depends on the optimum quantity of liquid distributed: a liquid quantity of 15 - 20% is recommended but in a few cases good results were obtained with a liquid quantity of 1 - 5%. In case of materials of low porosity, such as sodium chloride, the liquid quantity is maximum 3 - 5%. One of the most difficult problems of gas chromatography is the loss of liquid, which can, however, be reduced by using a small quantity of liquid, i.e. less than 10% on the support. A column of good stability should not have a loss higher than 1 mg/hr; in many cases, however, a loss of 1 g/min is allowed. In case of

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Experimental gas chromatography. V. Fixed phase

volatile liquids, a saturation vessel is placed before the column and a part of the dry support after the column, which prevents the liquid from reaching the detector. A column will keep its initial efficiency in 100 analyses, provided uninterrupted operation of the apparatus is maintained. There are 6 figures and 3 tables.

Card 4/4

SANDULESCU, D.  
SURNAME, Given Name

(5)

Country: Rumania

Academic Degrees: [not given]

Affiliation: Chemical Research Institute (Institutul de Cercetari Chimice).

Source: Bucharest, Revista de Chimie, Vol 12, No 8, Aug 1961, pp 503.

Data: "A Catalyzed Diels-Alder Reaction."

Authors:

EOTA, T.

BUCUR, C.

DRINGUS, I.

STANESCU, L.

SANDULESCU, D.

GPO 981643

SANDULESCU, D.  
SURNAME, Given Names

Country: Rumania

Academic Degrees: -not given-

Affiliation: -not given-

Source: Bucharest, Revista de Chimie, Vol 12, No 9, Sep 1961, pp 549-556

Data: "Experimental Gas Chromatography. VII. Detectors."

ere 901649

STERGHIU-FRIMESCU, Maria; SANDULESCU, D.

Applied chemical spectroscopy. I. Spectral apparatus. Rev chimie  
Min petr 12 no.12:710-717 D '61.

(Spectrochemistry) (Spectrograph)

STERGHIU-FRIMESCU, M.; SANDULESCU, D.

Applied chemical spectroscopy. Rev chimie Min petr 13 no.1:  
36-40 Ja '62.



SANDULESCU, D.; HANES, A.; BULACEANU, R.

Mass spectrometry. Rev chimie Min petr 13 no.12:735-744 D '62.

STERGHIU-FRIMESCU, M.; SANDULESCU, D.

Applied chemical spectroscopy. Pt. 4. Rev chimie Min petr 14  
no.2:104-109 F '63.

IONESCU, Al. Gh.; STANESCU, Ligia; BOZGAN, Viorica; TRESTIANU, S.;  
SANDULESCU, D.

Determination of fatty alcohols by gas chromatography. Rev chimie  
Min petr 14 no.6:347-349 Je '63.

1. Institutul de cercetari chimice.

L 64953-65 EPT(c)/ENP(j)/ENP(b)/ENP(t) IJP(c) RM/JD

ACCESSION NR: AP5023459

RU/0003/64/015/011/0665/0667

AUTHOR: Moldovan, I.; Sandulescu, D.; Ionescu, Al. Gh.; Radovici, G. 23

TITLE: High-purity alumina for catalysts 7

SOURCE: Revista de chimie, v. 15, no. 11, 1964, 665-667

TOPIC TAGS: catalysis, industrial catalyst, alumina

ABSTRACT: [Authors' English summary modified]: The authors describe the preparation of high-purity alumina by using aluminum isopropoxide as an intermediate. The raw materials used are aluminum, isopropyl alcohol, and very small quantities of carbon tetrachloride and mercurous chloride, and the technological scheme is quite simple and economical.  
Orig. Art. Incl.: 2 figures.

ASSOCIATION: Institutul de cercetari chimice (Institute of Chemical Research)

SUBMITTED: 00Apr64

ENCL: 00

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OTHER: 006

JPRS

1/1 KC

SANDULESCU, I.  
SURNAME, Given Names

Country: Rumania

Academic Degrees:

Affiliation: -not given-

Source: Bucharest, Farmacia, Vol IX, No 9, Sep 1961, pp 549-551.

Data: "Plants Included in the 7th Edition of the Rumanian Pharmacopoeia.  
Suggestions for the Eighth Edition."

Authors:

SANDULESCU, I., -Pharmacist.-  
DIMITRIU, P., -Pharmacist.-

07/13/01

SANDULESCU, Ion, ing.

Automatic collecting device of elementary coal samples.  
Energetica Rum 11 no.12:630-634 D'63.

SANDULESCU, Iosif, ing.; ANDREI, Ioan, ing.

On the improvement of the present itinerary guide.  
Rev cailor fer 10 no.1:7-10 Ja '62.

1. Directia Miscarii si Comercialului.

SANDULESCU, Iosif, ing.; MARIN, Titi, ing.

The idle standing freight cars and their rentability.  
Rev caillor fer 10 no.2:63-69 F '62.

1. Directia Miscarii si Comercialului.



ANDREI, I., ing.; SANDULESCU, I., ing.

Obtaining the gross weight of traffic flow through mechanization.  
Rev cailor fer 10 no.3:117-122 Mr '62.

1. Directia Miscarii si Comercialului.

ANDREI, Ioan, ing.; SANDULESCU, Iosif, ing.

Problem of the transport route from the loading-place.  
Rev sailor for 10 no.5:219-222 My '62.

1. Directia Miscarii si Comercialului.

SANDULESCU, Iosif, ing.; ANDREI, Ioan, ing.

Selection of the numerical value of the circulation of railroad cars necessary for the calculation of the formation plan.  
Rev. cailor fer 10 no.6:277-284 Je '62.

1. Directia miscarii si comercialului.

ANDREI, I., ing.; SANDULESCU, I., ing.

Selection of the most economical routes of railway transportation.  
Rev caiilor fer 10 no.7:331-336 J1 '62.

1. Din Directia miscarii si comercialului.

SANDULESCU, Iosif, ing.; ANDREI, Ioan, ing.

Use of the calculation mechanographic system with perforated cards,  
in the optimum variant determination of the formation plan. Rev  
cailor fer 10 no.9:461-468 S '62.

1. Directia miscarii si comercialului.

SANDULESCU, Iosif, ing.; TITI, Marin, ing.

Analysis of mathematical relations between the hauling time of  
railroad cars and its elements. Rev caiilor fer 11 no.1:3-9 Ja '63.

1. Directia M.C.

SANDULESCU, Iosif, ing.; POPA, Elena, ing.

Reduction of the reciprocal car exchange between two parallel  
shunting yards; a means of hauling time improvement. Rev sailor  
fer 11 no.4:207-212 Ap '63.

SANDULESCU, Iosif, ing.

Determination of the processing coefficient ( $K_{pr}$ ), a qualitative measure in the make up plan and in the decrease of hauling time. Rev sailor fer ll no.6:330-334 Je '63.

1. Dir. M/C.



SANDULESCU, Iosif, ing.

Improving the method of parametric equations and applying  
mathematics in the formation plan of trains in order  
to perform calculations with electronic machines.  
Rev callor fer ll no.7:378-387 J1 '63.

SANDULESCU, Iosif, ing.

Necessity of a unique and optimum numbering of the technical stations and traffic sections. Rev caiilor fer 11 no.10:565-570 0 '63.

1. Directia M.C.

SANDULESCU, Iosif, ing.

Calculation of the formation plan of grouped freight trains.  
Rev cailor fer 11 no.11:615-619 N°63.

SANDULESCU, Iosif, ing.

Mathematical methods for transport optimization. Rev sailor  
for 12 no.12;703-706 D '64.